SEP 2 3 2002

SEQUENCE LISTING

```
Rothman, James E.
     Mayhew, Mark
     Hoe, Mee H.
     Houghton, Alan
     Hartl, Ulrich
      Ouerfelli, Ouathek
     Moroi, Yoichi
<120> CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
<130> 11746/46002
<140> 10/053,498
<141> 2002-01-17
<150> 08/961,707
<151> 1997-10-31
<160> 321
<170> WordPerfect 8.0 for Windows
<210> 1
<211> 8
<212> PET
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 1
His Thr Thr Val Tyr Gly Ala Gly
<210> 2
<211> 8
<212> PET
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 2
Thr Glu Thr Pro Tyr Pro Thr Gly
 1
<210> 3
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
< 400 > 3
Leu Thr Thr Pro Phe Ser Ser Gly
 1
                  5
```

<110> Sloan-Kettering Institute for Cancer Research

```
<210> 4
<211> 8
<212> PRT
<213: Artificial Sequence
<220:
<223> peptide in m13 coliphage
<400:4
Gly Val Pro Leu Thr Met Asp Gly
<110> 5
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 5
Lys Leu Pro Thr Val Leu Arg Gly
<210> 6
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 6
Cys Arg Phe His Gly Asn Arg Gly
< 210 > 7
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 7
Tyr Thr Arg Asp Phe Glu Ala Gly
                  5
<210> 8
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 8
Ser Ser Ala Ala Gly Pro Arg Gly
```

```
<210> 9
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 9
Ser Leu Ile Gln Tyr Ser Arg Gly
<210> 10
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
Z2205
<221> MISC_FEATURE
<222> (7)..(7)
<223> unknown
<400> 10
Asp Ala Leu Met Trp Pro Xaa Gly
 1
<210> 11
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
< 0.00 >
<2221> MISC_FEATURE
<222> (3)..(3)
<223> unknown
<400> 11
Ser Ser Xaa Ser Leu Tyr Ile Gly
<210> 12
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 12
Phe Asn Thr Ser Thr Arg Thr Gly
<210> 13
<211> 8
```

```
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 13
Thr Val Gln His Val Ala Phe Gly
<210> 14
<111> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 14
Asp Tyr Ser Phe Pro Pro Leu Gly
<210> 15
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 15
Val Gly Ser Met Glu Ser Leu Gly
<210> 16
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<221> MISC_FEATURE
<222> (2)..(2)
<223> unknown
<220>
<221> MISC_FEATURE
<222> (6) ... (6)
<223> unknown
<400> 16
Phe Xaa Pro Met Ile Xaa Ser Gly
 1
<210> 17
 <211> 8
 <212> PRT
 <213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 17
Ala Pro Pro Arg Val Thr Met Gly
<210> 18
<211> 8
<212> PP.T
<213> Artificial Sequence
<220>
<123> peptide in m13 coliphage
<400> 18
Ile Ala Thr Lys Thr Pro Lys Gly
<210> 19
<211> 8
<212> PPT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 19
Lys Pro Pro Leu Phe Gln Ile Gly
<210> 20
<211> 8
<212> PET
<213> Artificial Sequence
<2205
<223> peptide in m13 coliphage
<400> 20
Tyr His Thr Ala His Asn Met Gly
<210> 21
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 21
Ser Tyr Ile Gln Ala Thr His Gly
<210> 22
<211> 8
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 22
Ser Ser Phe Ala Thr Phe Leu Gly
                  5
<210> 23
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<2223> peptide in ml3 coliphage
<400> 23
Thr Thr Pro Pro Asn Phe Ala Gly
<210> 24
<111> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 24
Ile Ser Leu Asp Pro Arg Met Gly
<210> 25
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 25
Ser Leu Pro Leu Phe Gly Ala Gly
<210> 26
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 26
Asn Leu Leu Lys Thr Thr Leu Gly
 1
<210> 27
<211> 8
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 27
 Asp Gln Asn Leu Pro Arg Arg Gly
 <210> 28
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 28
Ser His Phe Glu Gln Leu Leu Gly
<710> 29
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 29
Thr Pro Gln Leu His His Gly Gly
<210> 30
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223 > peptide in m13 coliphage
<400> 30
Ala Pro Leu Asp Arg Ile Thr Gly
<210> 31
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 31
Phe Ala Pro Leu Ile Ala His Gly
<210> 32
<211> 8
<212> PFT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 32
Ser Trp Ile Gln Thr Phe Met Gly
<210> 33
<211> 8
<212> PRT
<213> Artificial Sequence
<0.20>
<223> peptide in m13 coliphage
<400> 33
Asn Thr Trp Pro His Met Tyr Gly
<210> 34
<2115 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 34
Glu Pro Leu Pro Thr Thr Leu Gly
<210> 35
<211> 8
<212> PRT
<213> Artificial Sequence
<223> poptide in m13 coliphage
<400> 35
His Gly Pro His Leu Phe Asn Gly
<210> 36
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 36
Tyr Leu Asn Ser Thr Leu Ala Gly
<210> 37
<211> 8
<212> PRT
<213> Artificial Sequence
```

<223> peptide in m13 coliphage	
<400> 37	
His Leu His Ser Pro Ser Gly Gly 1 5	
<210> 38 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> DNA insert in M13 coliphage	
<400> 38	
catacgactg tttatggggc tggt	24
<pre><?10> 39 <211> 24 <212> DNA <213> Artificial Sequence</pre>	
<220> <223> random DNA in m13 coliphage	
<400> 39	
actgagacgc cttatcctac tggt	24
<210> 40 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 40	
cttactactc cgttttcgtc gggt	24
<210> 41 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 41	
ggtgtgcctc ttacgatgga tggt	24
<210> 42 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	

<400> 42	
aagetteega etgttetgeg gggt	24
<210> 43 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 43	
tgtcgctttc atgggaatcg tggt	24
<210> 44 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 44	
tatactcggg attttgaggc tggt	24
<210> 45 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 45	
tegteggegg etggteegeg gggt	24
<210> 46 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 46	
tetetgatte agtattegag gggt	24
<210> 47 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<220> <221> MISC_FEATURE <222> (19)(19) <223> unknown	

< 1002 47	
gatgetetta tgtggeetnt gggt	24
<210> 48 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<pre><220> <221> MISC_FEATURE <222> (8)(8) <223> unknown</pre>	
<400> 48	
tegtetentt egttgtatat tggt	24
<pre><210> 49 <211> 24 <212> DNA <213> Artificial Sequence</pre>	
<220> <223> random DNA in m13 coliphage	
<400> 49	
tttaatactt cgacgcgtac gggt	24
<210> 50 <211> 24 <212> DNA <213> Artificial Sequence	
<220> ?3 random DNA in ml3 coliphage	
<400> 50	
actgtgcagc atgttgcttt tggt	24
<210> 51 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 51	
gattattett tteegeetet tggt	24
<210> 52 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	

<400>	52	
gtgggg	gtcta tggagtcgtt gggt	24
<210><211><212><213>	24	
<220><223>	random DNA in ml3 coliphage	
<2223>	MISC_FEATURE (6)(6) unknown	
<222>	MISC_FEATURE (16)(16) unknown	
<222>	MISC_FEATURE (18)(18) unknown	
<400>	53	
tttcar	nccga tgattngntc gggt	24
<210><211><212><212><213>	24	
	random DNA in m13 coliphage	
<400>		
	ccgc gggttactat gggt	24
<210><211><211><212><213>	24	
<220><223>	random DNA in m13 coliphage	
<400>	55	
attgct	acga agacgcctaa gggt	24
<210><211><211><212><213>	24	
<220><223>	random DNA in m13 coliphage	
< 400>	56	

aagcctccgt tgtttcagat tggt	24
<210> 57 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 57	
tatcatactg ctcataatat gggt	24
<pre><310> 58 <311> 24 <212> DNA <313> Artificial Sequence</pre>	
<220> <223> random DNA in m13 coliphage	
<400> 58	
tettatatte aggetaegea tggt	24
<210> 59 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 59	
tcgtcttttg ctacttttct tggt	24
<210> 60 <011> 04 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 60	
acgactccgc cgaattttgc gggt	24
<210> 61 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 61	
atttctcttg atccgcgtat gggt	24
<210> 62 <211> 24	

<212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 62	
tegetgeege tgtttggtge gggt	24
<210> 63 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 63	
aatettetta agaetaeget tggt	24
<210> 64 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
< 400 > 64	
gatcagaatc tgccgcggcg gggt	24
<210> 65 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <ii3> random DNA in m13 coliphage</ii3>	
<400> 65	
agtcattttg agcagctgct tggt	24
<210> 66 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 66	
acgeegeage tteateatgg tggt	24
<210> 67 <211> 24 <212> DNA <213> Artificial Sequence	
<220>	

<223> random DNA in ml3 coliphage	
<400> 67	
gcgcctctgg ataggattac gggt	24
<210> 68 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 68	
tttgcgcctc ttattgcgca tggt	24
<210> 69 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 69	
tegtggattt agaegtttat gggt	24
<210> 70 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 70	
aatacttggc ctcatatgta tggt	24
<210> 71 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 71	
gagcetette egactaegtt gggt	24
<210> 72 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 72	

catgggeete atetgittaa tyyt	24
<210> 73 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<÷00> 73	
tatotgaatt otacgottgo tggt	24
<210> 74 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> peptide in m13 coliphage	
<400> 74	
catcttcata gtccgtcggg gggt	24
<210> 75 <211> 8 <212> PRT <213> Artificial Sequence	
<220> <223> random peptide in m13 coliphage	
<400> 75	
Thr Leu Pro His Arg Leu Asn Gly	
<210> 76 <111> 8 <212> PRT <213> Artificial Sequence	
<220> <223> peptide in ml3 coliphage	
<400> 76	
Ser Ser Pro Arg Glu Val His Gly	
<210> 77 <211> 8 <212> PRT <213> Artificial Sequence	
<220> <223> peptide in m13 coliphage	
<400> 77	
Asn Gln Val Asp Thr Ala Arg Gly 1 5	

```
<210> 78
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 78
Tyr Pro Thr Pro Leu Leu Thr Gly
<210> 79
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 79
His Pro Ala Ala Phe Pro Trp Gly
<210> 80
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 80
Leu Leu Pro His Ser Ser Ala Gly
<210> 81
<211> 8
<212> PP.T
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 81
Leu Glu Thr Tyr Thr Ala Ser Gly
<210> 82
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 82
Lys Tyr Val Pro Leu Pro Pro Gly
```

```
<210> 83
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 83
Ala Pro Leu Ala Leu His Ala Gly
<210> 84
<211> 8
<2112> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 84
Tyr Glu Ser Leu Leu Thr Lys Gly
<210> 85
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 85
Ser His Ala Ala Ser Gly Thr Gly
<210> 86
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 86
Gly Leu Ala Thr Val Lys Ser Gly
<210> 87
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 87
Gly Ala Thr Ser Phe Gly Leu Gly
```

```
<210> 88
 <211> 8
 -212> PRT
 <213> Artificial Sequence
 < 2 2 0 >
 <223> peptide in m13 coliphage
 <400> 88
 Lys Pro Pro Gly Pro Val Ser Gly
 <210> 89
 <211> 8
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
<400> 89
Thr Leu Tyr Val Ser Gly Asn Gly
<210> 90
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 90
His Ala Pro Phe Lys Ser Gln Gly
 1
<210> 91
<111> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 91
Val Ala Phe Thr Arg Leu Pro Gly
<210> 92
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 92
Leu Pro Thr Arg Thr Pro Ala Gly
```

```
<210> 93
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 93
Ala Ser Phe Asp Leu Leu Ile Gly
<710> 94
<211> 8
<2:12> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 94
Arg Met Asn Thr Glu Pro Pro Gly
<210> 95
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 95
Lys Met Thr Pro Leu Thr Thr Gly
<210> 96
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 96
Ala Asn Ala Thr Pro Leu Gly
 1
<210> 97
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 97
Thr Ile Trp Pro Pro Pro Val Gly
```

```
<210> 98
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 98
Gln Thr Lys Val Met Thr Thr Gly
<210> 99
<111> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 99
Asn His Ala Val Phe Ala Ser Gly
<210> 100
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> unknown
<400> 100
Leu His Ala Ala Xaa Thr Ser Gly
<210> 101
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 101
Thr Trp Gln Pro Tyr Phe His Gly
<210> 102
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
```

```
<400> 102
 Ala Pro Leu Ala Leu His Ala Gly
 <210> 103
 <211> 8
 <212> PRT
 <213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 103
Thr Ala His Asp Leu Thr Val Gly
<210> 104
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
< 400> 104
Asn Met Thr Asn Met Leu Thr Gly
<210> 105
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 105
Gly Ser Gly Leu Ser Gln Asp Gly
<210> 106
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 106
Thr Pro Ile Lys Thr Ile Tyr Gly
<210> 107
<211> 8
<212> PRT
<213> Artificial Sequence
```

<223> peptide in m13 coliphage

<220>

<400> 107	
Ser His Leu Tyr Arg Ser Ser Gly 1 5	
<210> 108 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 108	
actetgeete ategtetgaa tggt	24
<210> 109 <211> 24 <212> DNA <213> Artificial Sequence	
<2205 <223> random DNA in m13 coliphage	
<400> 109	
tegagteega gggaggttea tggt	24
<210> 110 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 110	
aatcaggttg atacggctcg gggt	24
<210> 111 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 111	
tatectaege egetgetgae tggt	24
<210> 112 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 112	
catcetgetg etttteettg gggt	24

	> 113	
<211>	> 24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	random DNA in m13 coliphage	
\ L 23/	random Sim in mis corresponde	
<400>	. 113	
(130)	113	
attat	tccgc attctagtgc tggt	24
	recege accepage egge	۷.
<210>	114	
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>	random DNA in m13 coliphage	
< 400>	114	
cttga	gactt atacggcttc tggt	24
<210>	115	
<211>	- 24	
<112>		
	Artificial Sequence	
12137	Artificial bequence	
<220>		
	random DNA in m13 coliphage	
\ <u></u>	Tandom DNA III mii S COIIphage	
- 100-	115	
<400>	115	
	115 tgtgc ctctgccgcc gggt	24
aagta	tgtgc ctctgccgcc gggt	24
aagta <210>	tgtgc ctctgccgcc gggt	24
aagta <210> <211>	tgtgc ctctgccgcc gggt 116 24	24
aagta <210> <211> <212>	tgtgc ctctgccgcc gggt 116 24 DNA	24
aagta <210> <211> <212>	tgtgc ctctgccgcc gggt 116 24	24
aagta <210> <211> <212>	tgtgc ctctgccgcc gggt 116 24 DNA	24
aagta <210> <211> <212>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence	24
aagta <210> <211> <212> <213> <223>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence	24
aagta <210> <211> <212> <213> <223>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence	24
aagta <210> <211> <212> <213> <223>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage	24
aagta <210> <211> <212> <213> <223>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage	24
aagta <210> <211> <212> <213> <223> <400>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage	
aagta <210> <211> <212> <213> <223> <400>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage	24
aagta <210> <211> <212> <213> <223> <400> gegee	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt	
aagta <210> <211> <212> <213> <223> <400> gegee <210>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24	
aagta <210> <211> <212> <213> <220> <223> <400> gegee <210> <211> <212>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212> <213>	116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212> <213>	116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212> <213>	116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212> <213>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212> <213>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212> <213> <400>	116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage	24
aagta <210> <211> <212> <213> <220> <223> <400> gegee <210> <211> <212> <213> <400>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage	
aagta <210> <211> <212> <213> <220> <223> <400> gcgcc <210> <211> <212> <213> <400> tatgag	116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage 117 gtcgc tgctgactaa gggt	24
aagta <210> <211> <212> <213> <220> <223> <400> gcgccc <210> <211> <212> <213> <400> tatgag <210>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage 117 219 Table 117 Table 117 Table 117 Table 117 Table 117 Table 118	24
aagta <210> <211> <212> <213> <220> <223> <400> gegee <210> <211> <212> <213> <400> <2211> <212> <213>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage 117 24 DNA Artificial Sequence random DNA in m13 coliphage 117 gtcgc tgctgactaa gggt 118 24	24
aagta <210> <211> <212> <213> <220> <223> <400> gegee <210> <211> <212> <213> <400> <211> <212> <213>	tgtgc ctctgccgcc gggt 116 24 DNA Artificial Sequence random DNA in m13 coliphage 116 gttgg ctctgcatgc gggt 117 24 DNA Artificial Sequence random DNA in m13 coliphage 117 24 DNA Artificial Sequence random DNA in m13 coliphage 117 gtcgc tgctgactaa gggt 118 24	24

<220> <223> random DNA in m13 coliphage	
<400> 118	
tstcatgcgg cttctggtac tggt	24
<210> 119 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 119	
ggtttggcga ctgttaagtc tggt	24
<210> 120 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 120	
ggtgctacgt cttttgggct tggt	24
<210> 121 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 101	
aagccgcctg ggccggtgtc gggt	24
<210> 122 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 122	
actctttatg tttctgggaa tggt	24
<210> 123 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 123	

catgeteegt ttaagtetea gggt	24
<210> 124 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 124	
gtggcgttta cgcggcttcc gggt	24
<210> 125 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 125	
ctgccgactg ctacgccggc tggt	24
<210> 126 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliphage	
<400> 126	
gcgagttttg atcttttgat tggt	24
<210> 127 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 127	
eggatgaata etgageetee gggt	24
<210> 128 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliphage	
<400> 128	
aagatgactc ctctgacgac tggt	24
<210> 129 <211> 24	

<212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 colip	nage
<400> 129	
gegaatgega egeetetget gggt	24
<210> 130 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 colipl	nage
<400> 130	
actatttggc ctccgcctgt tggt	24
<210> 131 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliph	ıage
<400> 131	
cagactaagg tgatgacgac gggt	24
<210> 132 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in ml3 coliph	ıage
<400> 132	
aatcatgctg tttttgctag tggt	24
<210> 133 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> random DNA in m13 coliph	nage
<220> <221> MISC_FEATURE <222> (13)(13) <223> unknown	
<400> 133	
ctgcatgcgg ctantacgtc gggt	24
<210> 134	

<211> 2 <212> I <213> A		
<220> <223> i	random DNA in m13 coliphage	
<400>	134	
acqtggc	cagc cgtattttca tggt	24
<210> 1 <211> 2 <212> E <213> A	24	
<220> <223> r	candom DNA in m13 coliphage	
<400> 1	135	
gegeegt	tgg ctctgcatgc gggt	24
<210> 1 <211> 2 <212> D <213> A	24	
<220> <223> r	andom DNA in m13 coliphage	
<400> 1	36	
acggcgc	atg atctgactgt tggt	24
<210> 1: <211> 2: <212> DI <213> A:	4	
<220> <223> ra	andom DNA in m13 coliphage	
<400> 13	37	
aatatgad	cta atatgettae tggt	24
<210> 13 <211> 24 <212> DM <213> Ax	4	
<220> <223> ra	andom DNA in m13 coliphage	
<400> 13	3.8	
ggttctgg	ggc tgtctcagga tggt	24
<210> 13 <211> 24 <212> DN <213> Ar	1	

```
<220>
<223> random DNA in m13 coliphage
<400> 139
acgccgatta agacgattta tggt
                                                                   24
<210> 140
<211> 24
<212> DNA
<213> Artificial Sequence
<223> random DNA in m13 coliphage
<400> 140
                                                                   24
tegeatetgt ategttetag tggt
<210> 141
<211> 8
<2112> PRT
<213> Artificial Sequence
<223> Random peptides in coliphage M13
<400> 141
Ser Ile Ile Asn Phe Glu Lys Leu
<210> 142
<211> 4
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 142
Gly Gly Gly Ser
<210> 143
<211> 8
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 143
His Trp Asp Phe Ala Irp Pro Trp
<210> 144
<211> 8
<212> PRT
<213> Artificial Sequence
```

<220>

```
<223> peptide in m13 coliphage
<400> 144
Phe Trp Gly Leu Trp Pro Trp Glu
<210> 145
<211> 5
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 145
Gln Lys Arg Ala Ala
<210> 146
<211> 5
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 146
Arg Arg Ala Ala
<210> 147
<211> 5
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 147
Lys Phe Glu Arg Gln
1
<210> 148
<211> 8
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 148
Arg Gly Tyr Val Tyr Gln Gly Leu
<210> 149
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 149
 Tir Thir Leu Val Gln Pro Leu
 <210> 150
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 < 220 >
 <223> peptide in m13 coliphage
 <400> 150
Thr Pro Asp Ile Thr Pro Lys
<210> 151
<211> 7
<212> PRT
<213> Artificial Sequence
< 220>
<223> peptide in m13 coliphage
<400> 151
Thr Tyr Pro Asp Leu Arg Tyr
<210> 152
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 152
Asp Arg Thr His Ala Thr Ser
<210> 153
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 153
Met Ser Thr Thr Phe Tyr Ser
<210> 154
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 154
 Tyr Gln His Ala Val Gln Thr
 <210> 155
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 155
Phe Pro Phe Ser Ala Ser Thr
 1
<210> 156
<?11> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 156
Ser Ser Phe Pro Pro Leu Asp
<210> 157
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 157
Met Ala Pro Ser Pro Pro His
<210> 158
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 158
Ser Ser Phe Pro Asp Leu Leu
<210> 159
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 159
 His Ser Tyr Asn Arg Leu Pro
 <210> 160
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 < 220 >
 <223> peptide in m13 coliphage
 <400> 160
His Leu Thr His Ser Gln Arg
  1
<210> 161
 <111> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 161
Gln Ala Ala Gln Ser Arg Ser
<210> 162
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in ml3 coliphage
<400> 162
Phe Ala Thr His His Ile Gly
<210> 163
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 163
Ser Met Pro Glu Pro Leu Ile
<210> 164
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 154
Ile Pro Arg Tyr His Leu Ile
<210> 165
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 165
Ser Ala Pro His Met Thr Ser
<210> 166
<211> 7
<212> PFT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 166
Lys Ala Pro Val Trp Ala Ser
<210> 167
<211> 7
<212> PP.T
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 167
Leu Pro His Trp Leu Leu Ile
<210> 168
<211> 7
<212> PP.T
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 168
Ala Ser Ala Gly Tyr Gln Ile
<210> 169
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
< 220 >
<223> peptide in ml3 coliphage
<400> 169
Val Thr Pro Lys Thr Gly Ser
<210> 170
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 170
Glu His Pro Met Pro Val Leu
<210> 171
<211> 7
<2112> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 171
Val Ser Ser Phe Val Thr Ser
<210> 172
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 172
Ser Thr His Phe Thr Trp Pro
<210> 173
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<4005 173
Gly Gln Trp Trp Ser Pro Asp
<210> 174
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 174
Gly Pro Pro His Gln Asp Ser
<210> 175
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 175
Asn Thr Leu Pro Ser Thr Ile
<210> 176
<211> 7
<212> PRT
<213> Artificial Sequence
< 220 >
<223> peptide in m13 coliphage
<400> 176
His Gln Pro Ser Arg Trp Val
<210> 177
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 177
Tyr Gly Asn Pro Leu Gln Pro
<210> 178
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 178
Phe His Trp Trp Gln Pro
<210> 179
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 179
 Ile Thr Leu Lys Tyr Pro Leu
 <210> 180
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 180
 Fhe His Trp Pro Trp Leu Phe
 <.10> 181
 < 111 > 7
 <212> PRT
 <213> Artificial Sequence
 <220>
<223> Random peptide in coliphage M13
<400> 181
Thr Ala Gln Asp Ser Thr Gly
 1
<210> 182
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 182
Phe His Trp Trp Gln Pro
<210> 183
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 183
Phe His Trp Trp Asp Trp Trp
<210> 184
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<223> peptide in m13 coliphage
 <400> 184
 Glu Pro Phe Phe Arg Met Gli.
 <210> 185
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 185
 Thr Trp Trp Leu Asn Tyr Arg
 <210> 186
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 186
Phe His Trp Trp Gln Pro
<210> 187
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 187
Gln Pro Ser His Leu Arg Trp
<210> 188
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 188
Ser Pro Ala Ser Pro Val Tyr
<210> 189
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 4400> 189
 The His Trp Trp Trp Gln Pro
 <210> 190
 < 211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 190
His Pro Ser Asn Gln Ala Ser
  1
<210> 191
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 191
Asn Ser Ala Pro Arg Pro Val
<210> 192
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 192
Gln Leu Trp Ser Ile Tyr Pro
<210> 193
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 193
Ser Trp Pro Phe Phe Asp Leu
<210> 194
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 194
 Asp Thr Thr Leu Pro Leu His
 <210> 195
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 195
 Trp His Trp Gln Met Leu Trp
 <210> 196
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 196
Asp Ser Phe Arg Thr Pro Val
<210> 197
<211> 7
<212> PRT
<213> Artificial Sequence
<.23> peptide in m13 coliphage
<400> 197
Thr Ser Pro Leu Ser Leu Leu
<210> 198
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 198
Ala Tyr Asn Tyr Val Ser Asp
<210> 199
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 199
 Arg Pro Leu His Asp Pro Met
 <210> 200
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 200
 Trp Pro Ser Thr Thr Leu Phe
 <:10> 201
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <120>
 <223> peptide in m13 coliphage
 <400> 201
Ala Thr Leu Glu Pro Val Arg
<210> 202
<211> 7
<212> PRT
<213> Artificial Sequence

<::3> peptide in m13 coliphage
<400> 202
Ser Met Thr Val Leu Arg Pro
<210> 203
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<100> 203
Gln Ile Gly Ala Pro Ser Trp
<210> 204
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 204
 Ala Pro Asp Leu Tyr Val Pro
 <210> 205
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 205
 Arg Met Pro Pro Leu Leu Pro
 <210> 206
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 206
Ala Lys Ala Thr Pro Glu His
<210> 207
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 207
Thr Pro Pro Leu Arg Ile Asn
<210> 208
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 208
Leu Pro Ile His Ala Pro His
<210> 209
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 209
Asp Leu Asn Ala Tyr Thr His
<210> 210
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 210
Val Thr Leu Pro Asn Phe His
<210> 211
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 211
Asn Ser Arg Leu Pro Thr Leu
<210> 212
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 212
Tyr Pro His Pro Ser Arg Ser
<210> 213
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 213
Gly Thr Ala His Phe Met Tyr
<210> 214
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<223> peptide in m13 coliphage
 <400> 214
 Tyr Ser Leu Leu Pro Thr Arg
 <210> 215
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 < 220>
 <223> peptide in m13 coliphage
 <400> 215
 Leu Pro Arg Arg Thr Leu Leu
 <210> 216
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 216
Thr Ser Thr Leu Leu Trp Lys
<210> 217
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 217
Thr Ser Asp Met Lys Pro His
<210> 218
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 218
Thr Ser Ser Tyr Leu Ala Leu
<210> 219
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 219
 Asn Leu Tyr Gly Pro His Asp
 <210> 220
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 < 220 >
 <223> peptide in m13 coliphage
 <400> 220
 Leu Glu Thr Tyr Thr Ala Ser
 1
<210> 221
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 221
Ala Tyr Lys Ser Leu Thr Gln
<210> 222
<211> 7
<212> PRT
<213> Artificial Sequence
< 33> peptide in m13 coliphage
<400> 222
Ser Thr Ser Val Tyr Ser Ser
<210> 223
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<100> 223
Glu Gly Pro Leu Arg Ser Pro
<210> 224
<211> 7
<212> PP.T
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 224
 Thr Thr Tyr His Ala Leu Gly
 <210> 225
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 225
Val Ser Ile Gly His Pro Ser
<210> 226
 <011> 7
 <212> PRT
 <213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 226
Thr His Ser His Arg Pro Ser
<210> 227
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 227
Ile Thr Asn Pro Leu Thr Thr
<210> 228
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 228
Ser Ile Gln Ala His His Ser
<210> 229
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 229
Leu Asn Trp Pro Arg Val Leu
<210> 230
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 230
Tyr Tyr Tyr Ala Pro Pro Pro
<010> 231 <011> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 231
Ser Leu Trp Thr Arg Leu Pro
<210> 232
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 232
Asn Val Tyr His Ser Ser Leu
 1
<210> 233
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 233
Asn Ser Pro His Pro Pro Thr
<210> 234
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 234
 Val Pro Ala Lys Pro Arg His
 <210> 235
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 235
 His Asn Leu His Pro Asn Arg
 <210> 236
 <311> 7
 <212> PRT
 <?13> Artificial Sequence
 <220>
<223> peptide in m13 coliphage
<400> 236
Tyr Thr Thr His Arg Trp Leu
<210> 237
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 237
Ala Val Thr Ala Ala Ile Val
<210> 238
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 238
Thr Leu Met His Asp Arg Val
<210> 239
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 239
Thr Pro Leu Lys Val Pro Tyr
<210> 240
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 240
Phe Thr Asn Gln Gln Tyr His
<210> 241
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 241
Ser His Val Pro Ser Met Ala
<210> 242
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in ml3 coliphage
<400> 242
His Thr Thr Val Tyr Gly Ala
<210> 243
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 243
Thr Glu Thr Pro Tyr Pro Thr
 1
<210> 244
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in ml3 coliphage
<400> 244
Leu Thr Thr Pro Phe Ser Ser
<210> 245
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 245
Gly Val Pro Leu Thr Met Asp
<210> 246
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 246
Lys Leu Pro Thr Val Leu Arg
<210> 247
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 247
Cys Arg Phe His Gly Asn Arg
<210> 248
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 248
Tyr Thr Arg Asp Phe Glu Ala
<210> 249
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
  <223> peptide in m13 coliphage
  <400> 249
  Ser Ser Ala Ala Gly Pro Arg
 <210> 250
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 250
 Ser Leu Ile Gln Tyr Ser Arg
 <210> 251
 < 0.11> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> unknown
 <400> 251
 Asp Ala Leu Met Trp Pro Xaa
<210> 252
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<220>
<221> MISC_FEATURE
<222> (3)..(3)
<223> unknown
<400> 252
Ser Ser Xaa Ser Leu Tyr Ile
                  5
<210> 253
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
```

```
<400> 253
 Phe Asn Thr Ser Thr Arg Thr
 <210> 254
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 254
 Thr Val Gln His Val Ala Phe
 <210> 255
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 255
 Asp Tyr Ser Phe Pro Pro Leu
<210> 256
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 256
Val Gly Ser Met Glu Ser Leu
<210> 257
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<221> MISC_FEATURE
<222> (2)..(2)
<223> unknown
<220>
<221> MISC_FEATURE
<222> (6) .. (6)
<223> unknown
```

<400> 257

```
Phe Xaa Pro Met Ile Xaa Ser
 <210> 258
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 258
 Ala Pro Pro Arg Val Thr Met
  1
 <210> 259
 <211> 7
 <212> PRT
 <213> Artificial Sequence
<120>
<223> peptide in m13 coliphage
<400> 259
Ile Ala Thr Lys Thr Pro Lys
<210> 260
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 260
Lys Pro Pro Leu Phe Gln Ile
<210> 261
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 261
Tyr His Thr Ala His Asn Met
<2105 262
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 262
```

```
Ser Tyr Ile Gln Ala Thr His
<210> 263
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 263
Ser Ser Phe Ala Thr Phe Leu
<210> 264
<311> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in ml3 coliphage
<400> 264
Thr Thr Pro Pro Asn Phe Ala
<210> 265
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 265
Ile Ser Leu Asp Pro Arg Met
<210> 266
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 266
Ser Leu Pro Leu Phe Gly Ala
<010> 267
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 267
```

```
Asn Leu Leu Lys Thr Thr Leu
<210> 268 <211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 268
Asp Gln Asn Leu Pro Arg Arg
<210> 269
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in ml3 coliphage
<400> 269
Ser His Phe Glu Gln Leu Leu
1
<210> 270
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 270
Thr Pro Gln Leu His His Gly
<210> 271
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 271
Ala Pro Leu Asp Arg Ile Thr
<210> 272
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 272
```

```
Phe Ala Pro Leu Ile Ala His
<210> 273
<211> 7
<212> PRT
<213> Artificial Sequence
< 2 2 0 >
<223> peptide in m13 coliphage
<400> 273
Ser Trp Ile Gln Thr Phe Met
<210> 274
<211> 7
<212> PRT
<213> Artificial Sequence
<2223> peptide in m13 coliphage
<400> 274
Asn Thr Trp Pro His Met Tyr
<210> 275
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 275
Glu Pro Leu Pro Thr Thr Leu
<210> 276
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 276
His Gly Pro His Leu Phe Asn
<210> 277
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 277
```

```
Tyr Leu Asn Ser Thr Leu Ala
<210> 278
<211> 7
<212> PRT
<113> Artificial Sequence
<223> peptide in m13 coliphage
<400> 278
His Leu His Ser Pro Ser Gly
<110> 279
<211> 7
<212> PRT
<213> Artificial Sequence
< 0.2.0 >
<123> peptide in m13 coliphage
<400> 279
Thr Leu Pro His Arg Leu Asn
<210> 280
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 280
Ser Ser Pro Arg Glu Val His
<210> 281
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 281
Asn Gln Val Asp Thr Ala Arg
<210> 282
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 282
```

```
Tyr Pro Thr Pro Leu Leu Thr
<210> 283
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 283
His Pro Ala Ala Phe Pro Trp
<210> 284
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 284
Leu Leu Pro His Ser Ser Ala
1
<210> 285
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 285
Leu Glu Thr Tyr Thr Ala Ser
<210> 286
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 286
Lys Tyr Val Pro Leu Pro Pro
<210> 287
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 287
```

```
Ala Pro Leu Ala Leu His Ala
 <210> 288
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Random peptide in coliphage M13
 <400> 288
 Tyr Glu Ser Leu Leu Thr Lys
 <210> 289
 <.11> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
<223> peptide in m13 coliphage
<400> 289
Ser His Ala Ala Ser Gly Thr
<210> 290
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 290
Gly Leu Ala Thr Val Lys Ser
<210> 291
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 291
Gly Ala Thr Ser Phe Gly Leu
<210> 292
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 292
```

```
Lys Pro Pro Gly Pro Val Ser
 <210> 293
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 293
 Thr Leu Tyr Val Ser Gly Asn
  1
 <210> 294
 <211> 7
 <212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 294
His Ala Pro Phe Lys Ser Gln
<210> 295
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 295
Val Ala Phe Thr Arg Leu Pro
<210> 296
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 296
Leu Pro Thr Arg Thr Pro Ala
                 5
<210> 297
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 297
```

```
Ala Ser Phe Asp Leu Leu Ile
 <210> 298
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in m13 coliphage
 <400> 298
 Arg Met Asn Thr Glu Pro Pro
 <110> 299
 < 211 > 7
 <212> PRT
 <213> Artificial Sequence
 <220>
<223> peptide in m13 coliphage
<400> 299
Lys Met Thr Pro Leu Thr Thr
<210> 300
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 300
Ala Asn Ala Thr Pro Leu Leu
<210> 301
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 301
Thr Ile Trp Pro Pro Pro Val
1
                  5
< 210 > 302
<211> 7
<212> PRT
<213> Artificial Sequence
< 220 >
<223> peptide in m13 coliphage
<400> 302
```

```
Gln Thr Lys Val Met Thr Thr
  <210> 303
  <211> 7
  <212> PRT
  <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 303
 Asn His Ala Val Phe Ala Ser
 <210> 304
 <211> 7
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> peptide in ml3 coliphage
 <220>
 <221> MISC_FEATURE
 <222> (5)..(5)
 <223> unknown
 <400> 304
 Leu His Ala Ala Xaa Thr Ser
 1
 <210> 305
 <211> 7
 <212> PRT
<213> Artificial Sequence
<2.3> peptide in m13 coliphage
<400> 305
Thr Trp Gln Pro Tyr Phe His
<210> 306
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in ml3 coliphage
<4005 306
Ala Pro Leu Ala Leu His Ala
<210> 307
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 307
Thr Ala His Asp Leu Thr Val
<210> 308
<211> 7
<212> PRT
<213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 308
Asn Met Thr Asn Met Leu Thr
<210> 309
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 309
Gly Ser Gly Leu Ser Gln Asp
<210> 310
<211> 7
<212> PRT
<213> Artificial Sequence
<:::s> peptide in ml3 coliphage
<400> 310
Thr Pro Ile Lys Thr Ile Tyr
 1
<210> 311
<211> 7
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<4005 311
Ser His Leu Tyr Arg Ser Ser
<210> 312
<211> 7
<212> PRT
<213> Artificial Sequence
```

```
<220>
 <223> peptide in m13 coliphage
 <400> 312
 His Gly Gln Ala Trp Gln Phe
 <210> 313
 <211> 9
 <212> PRT
 <213> Artificial Sequence
 <223> peptide in m13 coliphage
 <400> 313
 Leu Leu Gly Thr Leu Asn Ile Val
 <210> 314
 <211> 9
 <212> PRT
 <213> Artificial Sequence
<220>
<223> peptide in m13 coliphage
<400> 314
Leu Leu Met Gly Thr Leu Gly Ile Val
                  5
<210> 315
<211> 9
<212> PRT
<213> Artificial Sequence
< 220 >
<223> peptide in m13 coliphage
<400> 315
Thr Leu Gln Asp Ile Val Leu His Leu
<210> 316
<211> 9
<212> PRT
<213> Artificial Sequence
<223> peptide in m13 coliphage
<400> 316
Gly Leu His Cys Tyr Glu Gln Leu Val
<210> 317
<211> 9
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> peptide in m13 coliphage
<400> 317
Pro Leu Lys Gln His Phe Gln Ile Val
                  5
<210> 318
<211> 32
<212> DNA
<213> Artificial Sequence
<220>
<223> random DNA in m13 coliphage
<400> 318
agatatacat atggatgatg aagtcgacgt gg
                                                                   32
<210> 319
<311> 35
<212> DNA
<213> Artificial Sequence
<223> random DNA in m13 coliphage
<400> 319
                                                                   35
toggatoctt acaattoato ottototgta gatto
<210> 320
<211> 5
<212> PRT
<213> Artificial Sequence
<223> Random peptide in coliphage M13
<400> 320
Phe His Trp Trp Trp
<210> 321
<211> 19
<212> PRT
<213> Artificial Sequence
<220>
<223> hybrid peptide
<400> 321
Ser Ile Ile Asn Phe Glu Lys Leu Gly Ser Gly His Trp Asp Phe Ala
                  5
 1
Trp Pro Trp
```

19